

Decentralized Web
webinar series by



Resource guide

session 01

Decentralized Web

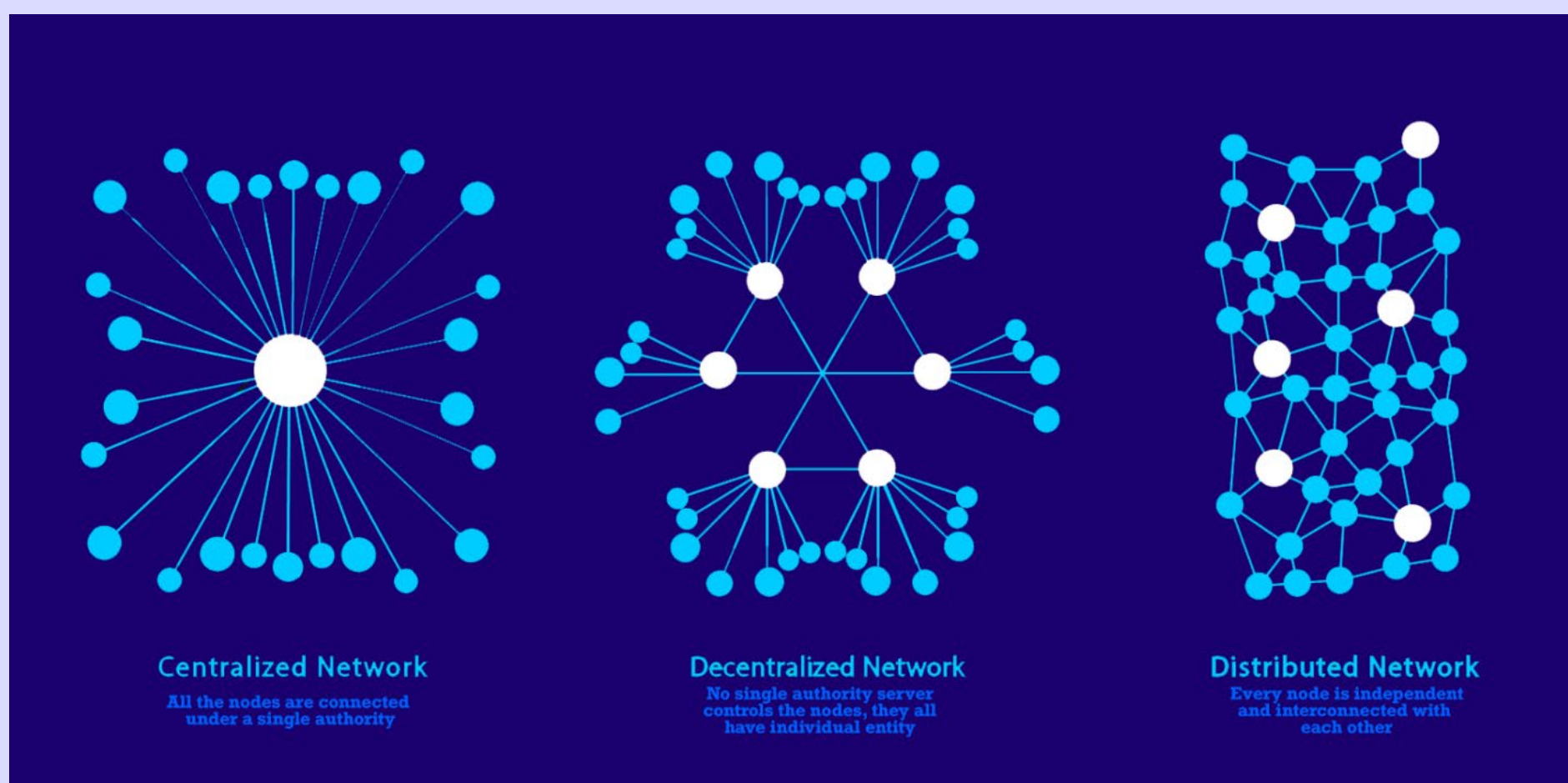
AN INTRODUCTION

Thursday, January 27, 2022

What does it mean to be ‘decentralized’?

A decentralized network is one where control is shared among multiple actors, and not concentrated in only a few large players, platforms, or servers. Control comes in many forms, such as having ownership of web infrastructure (e.g. servers or portals), ownership of data, influence to make decisions about the network, the power to delete contents, or decide who may access the network’s shared capabilities, information, and knowledge.

In decentralized networks, control of infrastructure and other technologies can be distributed among contributors rather than dictated by large (“central”) players.



↑ Wallace, Brandon D. [“Beyond Mere Decentralization – The Orthogonal Web.”](#)
Stories from the Decentralized Web (blog), April 8, 2021

Most decentralized protocols are “open source,” meaning that the code is publicly available for others to add to or iterate upon.

Some of the components of the World Wide Web that can be decentralized include storage, hosting, domain names, data, identity, data transport layers, or payments. Since at least 2015, the DWeb community has been dedicated to developing these technologies to build the web of the future - also known as the DWeb. The goal is to empower users to communicate and share using secure, private, and open technologies.

EXAMPLES ↓

Centralized networks

Facebook is a centralized network, where data is controlled by a central, all-powerful company.

Distributed networks

Amazon's Cloud is a distributed network, where the data is stored across a grid, but still controlled by a central entity.

Decentralized networks

Interplanetary File System (or IPFS) is a peer-to-peer hypermedia protocol, where the creator, Protocol Labs, does not control where or how the data is stored.

Web 1.0 and Web 2.0

the Read-Only Web

vs. the Read-Write Web

One way to think of the web's development over time is in terms of users' evolving relationship with the web's content and their possibilities to engage with said content. Right after the World Wide Web came into public use in the early-to-mid 1990s, a typical user's (self-hosted) website would be made up of hyperlinked text, files, applications, and other (static) digital objects that could be read and/or downloaded by website visitors. Users could read the content but not comment on it or alter it. This is why Web 1.0 has been called the read-only web.

Web 2.0, our present stage, started to develop in the early-to-mid 2000s. This is when platforms emerged to allow users to interact with content, and with one another. In Web 2.0, users make posts (such as comments or replies to other content) on websites that are usually hosted (and owned) by third parties, like Facebook profiles or Ebay product pages. Because these services strongly encourage (and benefit from) user-generated content, as well as user participation and engagement, Web 2.0 has also been called the read-write or social web.

The current Web has empowered everyone to become a publisher, sharing ideas and knowledge. But over time, Web 2.0 developed into a system that puts control in the hands of a few actors (corporate or governmental), to the detriment of individual user's privacy, security, and freedom of access.

The Decentralized Web vs. Web 3.0

The definition of Web 3.0 is still being debated. Some argue that the Decentralized Web and Web 3.0 are actually very different in form, function and mission. Here's how we define these two different technological realms:

The **Decentralized Web** seeks to decentralize all the layers of the current "Web stack". It requires a decentralized way to store and retrieve files, decentralized log-ins so users can interact, and a peer-to-peer payment system. A distributed identity system (proving you are who you say you are) that obviates the need for centralized usernames and passwords. Public key encryption that can protect privacy, so users could have more confidence they weren't being spied on. Decentralized databases could allow information to 'live' in many different places, so information can't easily be blocked or erased. The Decentralized Web could create a new "hash" code each time a web page changes, making past versions of the Web verifiable.

Meanwhile, **Web 3.0** has come to mean the "blockchain-ification" of the Web, using blockchain technologies & cryptocurrencies to verify transactions, pay for services, and certify content such as NFTs. The central innovation of Web 3.0 is the verification that blockchains afford. Some call this a "trustless" system, because you no longer have to trust the company or platform; the trust lies in the blockchain data itself. Others also lump in

Artificial Intelligence (AI) and virtual reality (the Metaverse) into Web 3.0.

In her essay, “Web3 is Self-Certifying,” Jay Graber proposes this definition: “Web3 is user-generated authority, enabled by self-certifying web protocols. These are a superset of technologies that include blockchains, but are not limited to them.” In this framework, users have cryptographically verified identities, post verifiable data, and the host can’t change them. We know this sounds a lot like a blockchain, but it’s broader than that. Some well known decentralized protocols that don’t rely on a blockchain include IPFS, Hypercore, Secure Scuttlebutt, and Peergos. In this webinar series, we’ll be demonstrating how these decentralized protocols actually work.

Recommended Resources

[Decentralized Web FAQ](#) by Wendy Hanamura

[Why Have a Decentralized Web?](#) By John Ryan in Medium

[What Exactly is Web3?](#) Video by Juan Benet, founder, Protocol Labs, at Web3Summit 2018. (Note: at about 6:00 he explains Web 1.0, Web 2.0 and Web 3.0 in a pithy way)

Dive Deeper

[Web3 is Self-Certifying](#) by Jay Graber. Medium, December 2021.

[From the Bottom to the Top: Mai Ishikawa Sutton on the Decentralized Web](#) by Mai Ishikawa Sutton [Logic Magazine article], May 2021

[Beyond Mere Decentralization: The Orthogonal Web](#) by Brandon Wallace. Medium, April 2020.

[Exploring the Decentralized Web](#). Video series produced by the [Filecoin Foundation for the Decentralized Web](#)

[Blockchain Explained](#). A Reuters visual guide to Blockchain technology. June 2018.

Community Resources

[GetDWeb.net](#) - web site of the DWeb Community, a global network of meetup groups working to build a better web, following these [core principles](#)

[Redigest](#) - Monthly newsletter by [Redecentralize.org](#)

[Stories from the Decentralized Web](#) - Medium Channel with event recaps, articles & reposts of fundamentals of the Decentralized Web

[DWeb Community Calendar](#)

Try it out!

[INOCULATE, Issue 02 of COMPOST Magazine.](#)
Published by Distributed Press and hosted on decentralized infrastructure. Read more about COMPOST on [the project's Wiki](#).

[How to Use IPFS with the Brave browser](#) by the Basic Attention Token Community. A short explainer video for beginners.

Try installing [Beaker Browser](#), the browser that lets you build peer-to-peer websites

Join the upcoming sessions

Jan 27 4 pm EST	The Decentralized Web: An Introduction Register →
--------------------	---

Feb 24 4 pm EST	In an Ever-Expanding Library, Using Decentralized Storage to Keep Your Materials Safe Register →
--------------------	--

Mar 31 4 pm EST	Keeping Your Personal Data Personal: How Decentralized Identity Drives Data Privacy Register →
--------------------	--

Apr 28 4 pm EST	Goodbye Facebook, Hello Decentralized Social Media? Can Peer-to-Peer Lead to Less Toxic Online Platforms? Register →
--------------------	--

May 26 4 pm EST	Decentralized Apps, the Metaverse and the “Next Big Thing” Register →
--------------------	---

June 30 4 pm EST	Ethics of the Decentralized Web & Uses for the Law, Journalism and Humanitarian Work Register →
---------------------	---